KUZNETSOV, V.P.

Beats in microseisms of soils caused by the swell of the sea. Dokl. AN Azerb. SSR 20 no.2:43-46 '64. (MIRA 17:6)

1. Institut geologii AN AzerSSR. Predstavleno akademikom AN Azer SSR A.D.Sultanovym.

KUZNETSOV, V.P.

Earthquake epicenters in the Apsheron Peninsula. Dokl. AN Azerb. SSR 19 no.8:43-48 '63. (MIRA 17:11)

1. Institut geologii AN AzSSR. Predstavleno akademikom AN AzSSR A.D. Sultanovym.

KUZNETSOV, V.P.

Earthquakes from a surface focus in Sumgait on December 12, 1959 and July 1, 1962. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.5:47-53 '64. (MIRA 18:6)

BAYMAKHANOV, M.T.; KARIMOV, B.A.; KUZNETSOV, V.P.

Study the ores of newly discovered deposits by making wider use of the possibilities offered by the Granitogorsk Experimental Ore Dressing Plant of the Kazakhstan Institute of Mineral Raw Materials. Razved. i okh.nedr 31 no.4:51-53 Ap '65. (MIRA 19:1)

1. Kazakhskiy nauchno-issledovatel'skiy institut mineral'nogo syr'ya Ministerstva geologii i okhrany nedr KazSSR.

AYZMAN, D.S., inzh.; GORELIK, G.I., inzh.; KUZNETSOV, V.P., kand. tekhn. nauk

Technological potentialities of machine-tool units manufactured at the Minsk Automatic-Line Plant. Mash. Bel. no.2:3-21 '60. (MIRA 16:7)

(Minsk--Machine tools)
(Automation)

TATAROV, Yu.N., inzh.; KUZNETSOV, V.P., inzh.; KUDYANOV, A.V., inzh.

Designing automatic lines for machining small-sized parts.
Mash. Bel. no.2:22-31 '60. (MIRA 16:7)

(Machine tools) (Automation)

S/193/60/000/008/006/018
A004/A001

AUTHORS: Gorfinkel', V. Ya., Kuznetsov, V.P.

TITLE: The Horizontal МП55 (MP55) Broaching Assembly

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 8, pp.25-27

TEXT: The Minskiy stankostroitel'nyy zavod im. Kirova (Minsk Machine Tool Plant im. Kirov) has brought out the special MP55 horizontal broaching assembly, designed by the Special Design Office No. 8 of the Byelorussian Sovnarkhoz and intended for the broaching of pillow bearing cap surfaces of the СМД (SMD) diesel engine. While the caps of all internal combustion engines manufactured in the USSR were formerly cast and machined individually, they are now cast in one block, all mechanical tooling is done on the block and finally the individual caps are cut off. The assembly is composed of two special horizontal broaching machines connected by an automatic conveyer which effects the loading and unloading of the machines and conveys the components between the machines. The assembly is attended by one operator who puts the work-pieces into the conveyer loading position. With a productivity of 75 sets per hour the assembly replaces ten milling and five broaching machines attended by 15 people. The surfaces of the cap lug are machined

Card 1/3

on the first machine, while the surfaces of separation, the semicircumferences and the lock are broached on the second machine. Since the first machine has an upper working carriage and the second has a lower one, the upper and lower surfaces can be broached without tilting the component which considerably simplifies the conveyer installation. All hydraulic devices are mounted on the top plate of the hydraulic container. The broaches are composed of individual carbide-tipped tools mounted on a common rack. The body of the clamping fixture mounted in the central part is a cast portal fastened to the machine bed by claws. To produce the necessary clamping stress, the slide bar is tightened by a wedge, having a stress of 8,000 kg and being displaced by an individual cylinder. The components are shifted by the conveyer bar and set in the machining position. Then the working motion starts and the conveyer bar returns into its initial position. At the end of the working motion the components on both machines are automatically unclamped, the component on the second machine being placed onto the unloading plate. The conveyer bar carries out an advancing stroke, the component is shifted by one step and the clamping fixture unloaded. As soon as the bar returns into its initial position the working carriages are reversed, and, by the following advance stroke, the bar loads the new component into the clamping fixture, while the cycle is repeated. Both radial piston pumps are connected parallel in the hydraulic system.

The Horizontal M55 (MP55) Broaching Assembly

S/193/60/000/008/006/018
A004/A001

The slowing down of the working carriage travel towards the end of the rough broaching operation and before the gaging operation is effected by switching off the control electromagnets of one pump, as a result of which the pump sliding block is placed in the zero-productivity position while the electromotor keeps running. 100 kg of chips are produced per hour on both machines. From the first machine they fall into a hopper and from the second they are sucked off by a ventilator installation. The following technical characteristics of the machines are given (the data of the second machine being put in brackets): maximum traction stress - 25,500 (57,000) kg; maximum speed of working stroke - 11 (10) m/min; maximum carriage travel - 1,500 (3,150) mm; overall dimensions (length x width x height) - 5,700 (7,900) x 1,450 (2,100) x 1,675 (2,040) mm; weight - 6,000 (13,000) kg. There is 1 figure.

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KUZNETSOV, V.P.

PHASE I BOOK EXPLOITATION SOV/5861

Gorbatsevich, Aleksandr Feliksovich, Vladimir Petrovich Kuznetsov, and Lev Grigor'yevich Yudovin

Avtomaticheskiye linii iz protyazhnykh stankov i avtomatizatsiya protyagivaniya (Automatic Broaching Lines and Automation in Broaching) Minsk, Gosizdat BSSR, 1961. 110 p. 1500 copies printed.

Ed.: S. Pol'skiy; Tech. Ed.: G. Domovskaya.

PURPOSE : This booklet is intended for tool engineers and technicians concerned with broaching operations and equipment.

COVERAGE: The booklet reviews various types of broaching machines. Detailed descriptions and illustrations are provided for some of these machines. Also discussed are the development of automation and automatic broaching lines and their fixtures. There are 19 references: 12 English, 5 Soviet, 1 Czech, and 1 German.

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TABLE OF CONTENTS:

Automatic Broaching Lines and (Cont.) SOV/5861

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DV/wrc/jw
1/17/62

GORBATSEVICH, Aleksandr Feliksovich [Horbatsevich, A.F.]; KUZNETSOV, Vladimir Petrovich; GORANSKIY, G.K., kand. tekhn. nauk, red.; TIMOFEYEV, L., red. izd-va; TURTSEVICH, L., tekhn. red.

[Automatic lines for manufacturing gear wheels] Avtomaticheskie linii dlia proizvodstva zubchatykh koles. Minsk, Izd-vo Akad. nauk BSSR, 1961. 132 p. (MIRA 15:1)
(Gear-shaping machines) (Automation)
(Gear-cutting machines)

KUZNETSOV, Vladimir Petrovich; GORBATSEVICH, Aleksandr Feliksovich; VANCHUK, L., red.

[Adjustable continuous lines] Perenalazhivaemye avtomaticheskie linii. Minsk, Belarus', 1964. 199 p. (MIRA 18:1)

KUZNETSOV, V.P.

AID P - 2966

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 16/35

Author : Kuznetsov, V. P., Eng.

Title : Simplification of the construction of a current relay with rapidly saturable transformers

Periodical : Energetik, 5, 21, My 1955

Abstract : The laboratory of a power station rebuilt a current relay designed originally by the Central Scientific Research Electric Engineering Laboratory (TsNiEL). The author presents briefly the calculations made.

Institution : None

Submitted : No date

В. М. [illegible]

Эффективность и помехоустойчивость некоторых методов двукратной передачи сигналов

Н. М. [illegible]

Помехоустойчивость приёмника по схеме Шоу

II. СЕКЦИЯ АНТЕННЫХ УСТРОЙСТВ

Руководитель А. Р. Вольперт

[illegible]

(с 10 до 16 часов)

В. Д. Кузнецов

Вопросы проектирования передающих антенн для телевидения и УКВ вещания

А. М. Модель,
Г. А. [illegible]

Антенно-волноводный тракт для радиорелейных линий, использующих рассеяние радиоволн в тропосфере

В. К. [illegible]

Антенна для линий связи с [illegible]

Л. Н. [illegible]

[illegible] синфазная антенна бегущей волны

А. А. Метрикин

Исследование [illegible] антенн для радиорелейных линий

[illegible]

(с 18 до 22 часов)

В. Н. [illegible],
Л. Д. Бахрах,
Н. Е. [illegible]

К вопросу о влиянии [illegible] на диаграмму направленности излучателя, расположенного вблизи конструкции.

Б. А. [illegible]

О влиянии [illegible] на диаграмму направленности антенны

В. Н. [illegible]

Некоторые случаи расчёта [illegible]

Е. Ф. [illegible]

Дифракция электромагнитных волн на [illegible] с переменным поверхностным импедансом.

М. Д. [illegible]

Возбуждение поверхностных волн на [illegible].

Report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow, 8-12 June. 1959

KUZNETSOV, V.P.

Concerning a certain standard design. Prom. energ. 16 no.12:48 D '61. (MIRA 14:12)

1. Trest "Elektromontazh", Gor'kiy.
(Boilers) (Electric substations)

S/169/61/000/011/002/065
D228/D304

AUTHORS: Kuznetsov, V.P., and Vaysman, G.I.

TITLE: Relay equipment with phonic signalling for warning of the burning-out of bulbs and the depletion of accumulators

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 8, abstract 11A79 (Dokl. AN AzerbSSR, 17, no. 3, 1961, 227 - 228)

TEXT: The equipment was completed in the form of an attachment to the device for controlling the operation of the PC-II (RS-II) recording apparatus. The polarizing relay is connected in series to the circuit supplying each of the collimator's bulbs. The relay armature is healed by the passing current when the lamp in the collimator burns. On the burning-out of a bulbs filament, the armature closes the current circuit to the phonic call under the influence of a permanent magnet, and a small control lamp lights up on the panel. A control for the lamps' current-supply system is introduced

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S/169/61/000/011/002/065
D228/D304

Relay equipment with phonic ...

to regulate the voltage in the accumulators. The relay operates to the phonic call at a current of less than 0.1 a. [Abstractor's note: Complete translation].

Card 2/2

KUZNETSOV, V.P.

Cable ducts without metallic structures. Prom.energ. 17 no.2:33 F '62. (MIRA 15:3)

(Electric lines--Underground)

ACC NR: AR6034795 (N) SOURCE CODE: UR/0398/66/000/008/A001/A001

AUTHOR: Kuznetsov, V. P.

TITLE: Method of developing the basic tables for the new "Rules for the construction of steel vessels for inland navigation"

SOURCE: Ref. zh. Vodnyy transport, Abs. 8A1

REF SOURCE: Tr. Leningr. in-ta vodn. transp., vyp. 81, 1965, 76-85

TOPIC TAGS: ship navigation, inland vessel data, shipbuilding engineering, ship component, steel, hull

ABSTRACT: It is reported that by assignment of the RSFSR River Register, the Leningrad Institute of Water Transportation had developed new "Rules for the Construction of Steel Vessels for Inland Navigation" to replace the rules presently in force, published in 1961, and the "Standards for the Calculation of the Strength of Hulls of Steel Ships of Inland Navigation in the USSR", published in 1956. A feature of the new rules is that they regulate, first and foremost, the longitudinal stays of a vessel which are part of the equivalent girder. The methodology of the

Card 1/2 UDC: 629.122.001.12

ACC NR: AR6034795

elaboration of the rules is described. Sixteen basic tables of the rules give the thicknesses of bottom plating, top plating or deck plating and the total area of the cross-sections of keelson, carling and longitudinal stiffeners. The thickness of keelson walls on double-bottomed ships is indicated. The total area of the section of the deck strake stays of open vessels is regulated. These values are given as a function of the length L of the ship, the height of the side H and the ratios B:H and T_r:H. They are distinct for vessels of different types, class and system of framing of bottom and deck coverings. In the development of the tables, the hull was considered as an equivalent girder, in the general case of assymetric section. A numerical example is given of the application of the new rules to a general cargo power-propelled O-type vessel, 90-m long, 13.2-m wide and with a 4.4-, high side. Orig. art. has: 2 figures. Bibliography has 5 references. N. Medvedev. [Translation of abstract] [GC]

SUB CODE: 11, 14/

Card 2/2

L 36397-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018783 SOURCE CODE: UR/0070/66/011/003/0479/0480

AUTHOR: Loginova, R. G.; Kuznetsov, V. P.; Ovsyannikov, M. I.; Postnikov, V. V.

ORG: Gor'kiy Physicotechnical Institute (Gor'kovskiy fiziko-tekhnicheskiy institut)

TITLE: Properties of epitaxial layers of silicon grown by vacuum sublimation

SOURCE: Kristallografiya, v. 11, no. 3, 1966, 479-480

TOPIC TAGS: single crystal, epitaxial growing, vacuum sublimation, temperature dependence, Hall constant, specific resistance, current carrier

ABSTRACT: Hall coefficients and specific resistivity measurements as functions of the concentration and mobility of current carriers were studied in single crystal Si films at temperatures ranging from 77° to 450°K. The thin films (50 to 200 μ) were produced by vacuum sublimation ($2 \cdot 10^{-7}$ mm Hg) on heated substrates (900° to 1200°C). Using the above data, the transport coefficients for *B* and *P* impurities were calculated. The films were *n*- and *p*-type, depending upon the source of the conductivity (*B* yielded *p*-type; *P* yielded *n*-type). The given temperature dependence for the concentration of current carries in Si films was compared to the *n*- and *p*-type conductivity for published data on Si single crystals. At equal impurity concentrations, the given Hall mobility of the current carriers in epitaxial films was close to the mobility measured in Si single crystals for all temperatures (77°-450°K). Films of *p*-type conductivity had

UDC: 548.52 : 539.23

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L 36397-66

ACC NR: AP6018783

specific resistivities equal to the original material (0.03 to 20 ohm-cm). The transport coefficient for *B* was equal to one. The *n*-type films had specific resistivities ranging from 0.1 to 100 ohm-cm. At a substrate temperature of 1150°C, the films contained 50 times less *P* than the original starting material, having a specific resistivity of 0.1 ohm-cm; at 900°C the concentration of the film was the same as the original material. Thus the transport coefficient of *P* in the grown films depended strongly on the substrate temperature, since at growth rates of 20 μ/hr and temperatures below 1200°C the diffusion of *P* is negligible. The authors expressed their gratitude to V. M. Obolikshto for assistance in the work. Orig. art. has: 2 figures.

SUB CODE: 20,09/ SUBM DATE: 25Oct65/ ORIG REF: 003/ OTH REF: 006

Card 2/2 MLP

KUZNETSOV, V.P.

Electromagnetic corrections in μ--e-decay. Zhur.eksp.i teor. fiz. 37 no.4:1102-1105 O '59. (MIRA 13:5)

1. Moskovskiy fiziko-tekhnicheskiy institut.
(Radioactive substances--Decay)

88449

S/056/60/039/006/041/063
B006/B063

24.6900

AUTHOR: Kuznetsov, V. P.

TITLE: Internal Bremsstrahlung and Electromagnetic Corrections to the μ-e Decay

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1721 - 1726

TEXT: Following Ref.2 the present paper presents a calculation of electromagnetic corrections to electron polarization, to the correlation between electron and muon polarizations in μ-e decays, and also to the polarization and angular distribution of gamma quanta in internal bremsstrahlung. According to Gell-Mann and Feynman, the electron spin polarization vector $\vec{\xi}_2$ is set equal to $-\vec{n}_2$, and the calculation is made in the approximation $m_1/m_2 \gg 1$ (m_1,m_2 - muon and electron mass), where radiative corrections do not influence the character of electron polarization. As the radiative corrections to the μ-e decay are equal to those to the term proportional to $\vec{\xi}_2\vec{n}_2$, there is no infrared divergence

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Internal Bremsstrahlung and Electromagnetic Corrections to the μ-e Decay

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in the expression for $\vec{\xi}_2$. First, the correction for internal bremsstrahlung is determined:

$$\xi_2 = -n_2 \frac{r_1(\varepsilon) - \xi_1 n_2 s_1(\varepsilon)}{r_2(\varepsilon) - \xi_1 n_2 s_2(\varepsilon)},$$

$$\begin{aligned} r_1(\varepsilon) &= 3 - 2\varepsilon + \frac{\alpha}{2\pi}\left[f(\varepsilon) - \frac{1}{3}\varepsilon^{-2}(1-\varepsilon)^2(5-2\varepsilon)\right], \\ s_1(\varepsilon) &= 2\varepsilon - 1 + \frac{\alpha}{2\pi}\left[h(\varepsilon) - \frac{1}{3}\varepsilon^{-2}(1-\varepsilon)^2(1+2\varepsilon)\right], \\ r_2(\varepsilon) &= 3 - 2\varepsilon + \frac{\alpha}{2\pi} f(\varepsilon), \qquad s_2(\varepsilon) = 2\varepsilon - 1 + \frac{\alpha}{2\pi} h(\varepsilon); \end{aligned} \tag{4}$$

where $\varepsilon = 2\varepsilon_2/m_1$; $\varepsilon_1, \varepsilon_2, \varepsilon_\gamma$ denote the energies of μ, e, and γ; $f(\varepsilon)$ and $h(\varepsilon)$ are defined in Ref.2; $\vec{\xi}_1$ is the polarization vector of the muon. If the muon is unpolarized, $\vec{\xi}_2 = -\vec{n}_2[1-\Delta]$, $\Delta = \frac{\alpha}{2\pi}\frac{1}{3}\frac{1}{\varepsilon^2}\cdot(1-\varepsilon)^2\frac{5-2\varepsilon}{r_2(\varepsilon)}$, i.e., the correction is significant only in the range $\varepsilon \lesssim 0.1$, where the electron is only slightly polarized. The correction in the case of

Internal Bremsstrahlung and Electromagnetic Corrections to the μ-e Decay

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$\varepsilon \to \varepsilon_{min}$, which increases rapidly with $\varepsilon \to \varepsilon_{min}$, is studied next. In the low-energy range of the spectrum, many-photon bremsstrahlung and pair production have to be taken into account. For the interval $0 \leq \theta \lesssim 3$ one finds

$$\xi_3 = -n_3 \frac{(3-2\varepsilon)\,\mathrm{th}\,\theta + \alpha g(\theta)/2\pi - \xi_1 n_3 [(2\varepsilon-1)(\mathrm{ch}\,\theta - 1)/\mathrm{ch}\,\theta + \alpha l(\theta)/2\pi]}{3-2\varepsilon+\alpha f(\theta)/2\pi - \xi_1 n_3 [(2\varepsilon-1)\,\mathrm{th}\,\theta + \alpha h(\theta)/2\pi]} -$$

$$- \xi_1 \frac{2\varepsilon^{-1}(1-\varepsilon)\, m_2/m_1 + \alpha m(\theta)/2\pi}{3-2\varepsilon+\alpha f(\theta)/2\pi - \xi_1 n_3 [(2\varepsilon-1)\,\mathrm{th}\,\theta + \alpha h(\theta)/2\pi]}. \qquad (11)$$

and for $\vec{\xi}_1 = 0$ one obtains

$$\xi_3 = -n_3(1-\Delta),$$

$$\Delta = \left[(3-2\varepsilon)(1-\mathrm{th}\,\theta) + \frac{\alpha}{2\pi}\left(\frac{m_1}{m_3}\right)^2 \cdot \frac{5}{6}\frac{1+\theta-\theta\,\mathrm{cth}\,\theta}{\mathrm{sh}\,2\theta}\right]\left[3-2\varepsilon+\frac{\alpha}{2\pi}f(\theta)\right]^{-1}.$$

In the non-relativistic case, $\vec{\xi}_2 = -n_2 \cdot 0.42\,\theta$, $\theta \ll 1$, and in the interval $1 \lesssim \theta \lesssim 3$ one obtains

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Internal Bremsstrahlung and Electromagnetic Corrections to the μ-e Decay

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$$\xi_3 = -n_2\left\{3-2\varepsilon+\frac{\alpha}{2\pi}\frac{5}{3}\varepsilon^{-2}(\ln\varepsilon+\omega-1)-\right.$$
$$\left.-\xi_1 n_2\left[2\varepsilon-1+\frac{\alpha}{2\pi}\frac{1}{3}\varepsilon^{-2}(\ln\varepsilon+\omega-2)\right]\right\}\times$$
$$\times\left\{3-2\varepsilon+\frac{\alpha}{2\pi}\frac{5}{3}\varepsilon^{-2}(\ln\varepsilon+\omega)-\xi_1 n_2\left[2\varepsilon-1+\frac{\alpha}{2\pi}\frac{1}{3}\varepsilon^{-2}(\ln\varepsilon+\omega-1)\right]\right\}^{-1},$$

$$\Delta = \frac{\alpha}{2\pi}\frac{5}{3}\varepsilon^{-2}\Big/\left[3-2\varepsilon+\frac{\alpha}{2\pi}\frac{5}{3}\varepsilon^{-2}(\ln\varepsilon+\omega)\right].$$

The functions $f(\varepsilon)$, $h(\varepsilon)$, Δ, r_i, and s_i are illustrated in a table and a figure. The author thanks Professor V.B. Berestetskiy for supervising the work, and Professor A. O. Vaysenberg for interest and discussions. There are 1 figure, 1 table, and 5 references: 1 Soviet and 4 US.

ASSOCIATION: Moskovskiy fiziko-tekhnicheskiy institut (Moscow Institute of Physics and Technology)

SUBMITTED: July 7, 1960

Card 4/5

KUZNETSOV, V. P.

Cand Phys-Math Sci - (diss) "Electromagnetic corrections to μ-e decay, and internal inhibiting radiation." Moscow, 1961. 5 pp; (Academy of Sciences USSR, Inst of Experimental and Theoretical Physics); 150 copies; price not given; bibliography at end of text(17 entries); (KL, 10-61 sup, 204)

RABINOVICH, M.L., inzh.; KUZNETSOV, V.P., inzh.

Group devices with semiconductor rectifiers for the electromagnetic drives of electric cutouts. Prom. energ. 20 no.1:16-17 Ja '65. (MIRA 18:4)

KUZNETSOV, V. S.

Agriculture

Green fertilizers in the agriculture of Uzbekistan, AN Uzb. SSR, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

KUZNETSOV, P.

Kuznetsov, P. "The influence of trace elements on the increase in the rate of ripening and the yield of the cotton plant", (In index: V.P. Kuznetsov), Izvestiya Akad. nauk UzSSR, No. 3, p. 50-57, (Resume in Uzbek), - Bibliog: 6 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

USSR / Cultivated Plants. Plants for Technical Use. M-6
Sugar Plants.

Abs Jour: Ref Zhur-Biol., 1958, No 16, 73034.

Author : Kuznetsov, V. P.
Inst : Central Asian Scientific-Research Institute of Irrigation.
Title : Sprinkling Irrigation of Cotton and Grasses.

Orig Pub: Byul. nauchno-tekhn. inform. Sredneaz. n.-i. in-t irrigatsii, 1957, No 2, 17-18.

Abstract: Tests were conducted in 1954-1956 on heavy, thick soils in Bukharskaya Oblast. Distance sprinkling machines DDP-30 s. were used. These machines can be used with success in irrigation networks with tree plantations. Surface accumulation of water occurred in the lowland parts of sloped irrigated areas with rate of 400-500 m^3/ha. With a combina-

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USSR / Cultivated Plants. Plants for Technical Use. M-6
Sugar Plants.

Abs Jour: Ref Zhur-Biol., 1958, No 16, 73034.

Abstract: tion of basic irrigation with refreshers (50-100 m^3/ha), no marked salinity of the soil occurred. Irrigation rates were almost cut in half by sprinkling, and the yield in comparison with ditch irrigation increased by almost 10 centners/ha. Watering costs comprised on the average about 85 rubles per ha. -- A. M. Smirnov.

Card 2/2

KUZNETSOV, V.P., starshiy nauchnyy sotrudnik

Radioactive elements and their role in increasing cotton yields. Trudy SANIIRI no.97:43-57 '59. (MIRA 13:6)
(Cotton-Fertilizers and manures)
(Plants, Effect of radioactivity on)
(Soil structure)

KUZNETSOV, V.P., doktor sel'skokhozyaystvennykh nauk, dotsent

Biological aspects and cultivation problems related to the growing of wild pear rootstock in soil blocks. Izv. TSKhA no.3:137-151 '60. (MIRA 14:4)
(Pear)

KUZNETSOV, V.P., inzh.

In one month 56,364 tons of coal were mined from one longwall. Ugol'. prom. no.6:3-6 N-D '62. (MIRA 16:2)

1. Lisichanskiy trest ugol'noy promyshlennosti Ministerstva ugol'noy promyshlennosti SSSR.
(Privol'nyanskiy region—Coal mines and mining)

TURNEYEV, P.S.; KUZNETSOV, V.P.

Integrated brigade working around the clock in longwalls of mines of the Lisichanskugol' Trust. Ugol'. prom. no.6:16-17 N-D '62. (MIRA 16:2)

1. Nachal'nik otdela truda i zarabotnoy platy Lisichanskogo tresta ugol'noy promyshlennosti SSSR (for Turneyev). 2. Nachal'nik normativno-issledovatel'skoy stantsii Lisichanskogo tresta ugol'noy promyshlennosti Ministerstva ugol'noy promyshlennosti SSSR (for Kuznetsov).
(Donets Basin—Coal mines and mining—Labor productivity)

DMITRIYENKO, Yu.I., inzh.; IVASHIN, V.M., inzh.; KUZNETSOV, V.P., inzh.; MATSYUK, M.F., inzh.; YAKOVLEV, N.A., inzh.

The "Luganskugol'" competition in the mines of Luganskugol' Combine. Ugol' Ukr. 6 no.5:23-26 My '62. (MIRA 15:11)
(Donets Basin--Coal mines and mining)
(Socialist competition)

GRIGOR'YEV, I.A.; KUZNETSOV, V.P.; SIVYY, V.B.

[Determining coal mining potentials and the efficiency of using them] Vyiavlenie rezervov dobychi uglia i effektivnost' ikh ispol'zovaniia. Moskva, Nedra, 1964. 99 p.
(MIRA 18:3)

KUZNETSOV, V.P.

Study of the effect of tryptotamine sulfate (ecmolin) on the activity of dehydrogenases and aerobic oxidation in bacteria. Trudy TSIU 80:112-116 '65. (MIRA 18:11)

KUZNETSOV, V.P.

Effect of triprotamine sulfate on the effectiveness of oxidative phosphorylation and the nucleic acid content in bacterial cells. Antibiotiki 10 no.2:105-112 F '65. (MIRA 18:5)

1. Kafedra mikrobiologii (zav. - deystvitel'nyy chlen AMN SSSR prof. Z.V.Yermol'yeva) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

KUZNETSOV, V.P.

Device for lifting lime. Suggested by V.P.Kuznetsov. Rats.i izobr.predl.v stroi. no.8:75-78 '58. (MIRA 13:3)

1. Sotrudnik bazy mekhanizatsii tresta Sevkavtyazhstroy. Po materialam tresta Sevkavtyazhstroy.
(Lime) (Hoisting machinery)

KUZNETSOV, V.P.; RODIN, N.V.

The AM22-type automatic 80-spindle machine. Biul.tekh.-ekon. inform. no.11:23-24 '59. (MIRA 13:4)
(Drilling and boring machinery)

PAN'KOV, Valeriy L'vovich; KUZNETSOV, Vladimir Prokof'yevich; KORNEYEV, S.G., red.; KHAYKINA, A.Ye., nauchn. red.; POPOV, V.N., tekhn. red.

[Steel arms] Stal'nye ruki. Tambov, Tambovskoe knizhnoe izd-vo, 1962. 16 p. (Bibliotechka novatora, no.8) (MIRA 16:10)

(Materials handling)

KUZNETSOV, V.P., kapitan-leytenant

Personal error in observations for the measurement of the altitude of celestial bodies. Mor.sbor. 46 no.2:65-69 F '63.
(MIRA 16:2)

(Nautical astronomy) (Persoanl equation)

KUZNETSOV, V.P., kandidat tekhnicheskikh nauk.

Calculation of the strength of block peat. Trudy Inst.torf. AN BSSR 4:131-137 '55. (MLRA 9:3)

(Peat)

KUZNETSOV, V.P.

Effect of the elasticity of peat on the mechanical treatment.
Trudy inst. torf. AN BSSR 8:245-251 '59. (MIRA 13:12)
(Peat)

KUZNETSOV, V.P.

Studies on the effect of triprotamine sulfate on the activity of oxidases in the bacterial cell. Antibiotiki 10 no.1:58-64 Ja '65. (MIRA 18:4)

1. Kafedra mikrobiologii (zav. - deystvitel'nyy chlen AMN SSSR prof. Z.V.Yermol'yeva) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

BELOUS, N.Kh., st. nauchn. sotr.; KAZANSKIY, Yu.P.; VDOVIN, V.V.; KLYAROVSKIY, V.M.; KUZNETSOV, V.P.; NIKOLAYEVA, I.V.; NOVOZHILOV, V.I.; SENDERZON, E.M.; AKAYEV, M.S.; BABIN, A.A.; BERDNIKOV, A.P.; GORYUKHIN, Ye.Ya.; NAGORSKIY, M.P.; PIVEN', N.M.; BAKANOV, G.Ye.; GEBLER, I.V.; SMOLYANINOV, N.M.; SMOLYANINOVA, S.I.; YUSHIN, V.I.; D'YAKONOVA, N.D.; REZAPOV, N.M.; KASHTANOV, V.A.; GOL'BERT, A.V.; SIDOROV, A.P.; GARMASH, A.A.; LYKOV, M.S.; BORODIN, L.V.; RYCHKOV, L.F.; KUCHIN, M.I.; SHAKHOV, F.N., glav. red.; SHPAKOVSKAYA, L.I., red.

[West Siberian iron ore basin] Zapadno-Sibirskii zhelezorudnyi bassein. Novosibirsk, Red.-izd. otdel Sibirskogo otdniia AN SSSR, 1964. 447 p. (MIRA 17:12)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut geologii i geofiziki. 2. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR (for Belous, Kazanskiy, Vdovin, Klyarovskiy, Kuznetsov, Nikolayeva, Novozhilov, Senderzon). 3. Institut gornogo dela (for Akayev). 4. Novosibirskoye geologicheskoye upravleniye Ministerstva geologii i okhrany nedr SSSR (for Babin, Berdnikov, Goryukhin, Nagorskiy, Piven').

(Continued on next card)

BELOUS, N.Kh.---(continued). Card 2.

Tomskiy politekhnicheskiy institut (for Yakenov, Gabler, Smolyaninov, Smolyaninova). 5. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya(for Yushin, D'yakonova, Rezapov, Kashtanov, Gol'bert). 6. Institut ekonomiki sel'skogo khozyaystva (for Garmash). 7. Sibirskiy metallurgicheskiy institut (for Bykov, Borodin, Rychkov). 8. Tomskiy inzhenerno-stroitel'nyy institut (for Kuchin). 9. Chlen-korrespondent AN SSSR (for Shakhov).

KUZNETSOV, V. R. (Moskva)

Effect of the rate of chemical reaction on the process of combustion of a fuel drop. Inzh. zhur. 2 no.4:344-349 '62. (MIRA 16:1)

(Combustion)

L 1659-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACCESSION NR: AP5021534 UR/0258/65/005/004/0763/0767
533.6.011

AUTHOR: Kuznetsov, V. R. (Moscow)

31
B

TITLE: Turbulence in parallel flows of equal velocity

SOURCE: Inzhenernyy zhurnal, v. 5, no. 4, 1965, 763-767

TOPIC TAGS: turbulent flow, mixed flow, turbulence diffusion, stream mixing

ABSTRACT: The turbulence transfer from a turbulent stream discharging from a plane nozzle into a laminar stream moving at the same velocity is considered. The model is based on the mixing processes described by A. A. Taunsend (Struktura turbulentnogo potoka s poperechnym zdvigom. IL, 1959) with eddy diffusion occurring across the flow interface. Based on arguments that the mixing coefficient (probability of turbulence at a given point) has a normal distribution (S. Corrsin and A. L. Kistler. The Free-stream Boundaries of Turbulent Flow. Technical notes NACA, Washington, N3133) and that the eddies interact only weakly among each other (Dzh. Betchelor. Teoriya odnorodnoy turbulentnosti. IL, 1955), it is assumed that the distribution of pulsation energy can be described by the normal diffusion equation. Since the amount of dispersed energy can be described by

Card 1/3

ACCESSION NR: AP5021534

$$\varepsilon = \frac{3}{2}\gamma\frac{(\overline{u^2})^{3/2}}{L_\varepsilon},$$

(first reference in this abstract) (where $\gamma \approx 1$; L_ε - integral turbulence scale), the equation for the process is given as

$$U\frac{\partial \overline{u^2}}{\partial x} = D(x)\Delta\overline{u^2} - \frac{\gamma(\overline{u^2})^{3/2}}{L_\varepsilon},$$

Since

$$\overline{u_1} = u_0(x)/\left[\frac{\nu}{L_\varepsilon(x)}\right] = u_0/(x),$$

has to be satisfied and three other simplified conditions can be satisfied by the solution

$$u_0 = A(x+x_0)^{\frac{m}{2-n}}, \quad L_\varepsilon = B(x+x_0)^{\frac{1}{2-n}}, \quad D = C(x+x_0)^{\frac{n+m}{2-n}},$$

the differential equation is finally written as

$$\varphi'' = \frac{1}{\varepsilon}\varphi' - \varphi + \varphi^{3/2},$$

Card 2/3

L 1659-66

ACCESSION NR: AP5021534

(where $f = \left[\frac{(2-a)UB}{2a\gamma\sqrt{A}}\right]^{2}\varphi, \quad s = \sqrt{\frac{C(2-a)}{-2B^{2}aU}},$

and a = -1, -2, -3....). Taunsend (op. cit.) and O. Phillips (The Irrotational Motion outside a Free Turbulent Boundary. Proc. Cambr. Phil. Soc., v. 51, 1955) showed that a = -4 away from the axis and neglecting $\phi^{3/2}$ the equation can be integrated as

$$\varphi = \frac{1}{2}\varphi_0 \frac{d^3}{ds^3}\left(e^{-\frac{1}{6}s^3}\int_0^s s e^{\frac{1}{6}s^3}\, ds\right).$$

The 5 possible solutions depending on the initial flow conditions ($\phi_0 > 1$; $\phi_0 = 1$; $1.0 > \phi_0 > 0.75$; $0.75 > \phi_0 > 0.3$, and $\phi_0 < 0.3$) are briefly discussed. Orig. art. has: 1 figure and 12 formulas.

ASSOCIATION: none

SUBMITTED: 25Apr64 ENCL: 00 SUB CODE: ME

NO REF SOV: 001 OTHER: 004

Card 3/3 DP

KUZNETSOV, V.S.

Clinical picture of diphtheria in the adult. Terap. arkh. 31 no.5: 77-84 My '59. (MIRA 12:7)

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K.V. Bunin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(DIPHTHERIA
in adults, clin. aspects (Rus))

POKROVSKIY, V.I., kand.med.nauk; BAKKOVA, Ye.V.; KUZNETSOV, V.S.

Clinical aspects and therapy of suppurative meningitis induced by Afanasev-Pfeiffer's bacillus. Pediatriia 37 no.10:69-74 O '59. (MIRA 13:2)

1. Iz kafedry infektsionnykh bolezney (zaveduyushchiy - prof. K.V. Bunin) I Moskovskogo meditsinskogo instituta imeni I.M. Sechenova (direktor - prof. V.V. Kovanov) i 1-y Moskovskoy klinicheskoy infektsionnoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR N.G. Zaleskver).

(MENINGITIS in inf. & child.)
(HAEMOPHILUS INFLUENZAE infect.)

BULKINA, I.G.; BUNIN, K.V., prof.; KUZNETSOV, V.S.; MIKHAYLOVA, Yu.M.; NOVAKOVSKAYA, A.A.; POKROVSKIY, V.I.; POLUMORDVINOVA, Ye.D.; SEDLOVETS, M.P.; STARSHINOVA, V.S.; TSEYDLER, S.A.; SHKHVATSABAYA, T.V.; YAKHONTOVA, N.K.; SHERESHEVSKAYA, Ye.F., red.; ZUYEVA, N.K., tekhn. red.

[Pocket manual for the specialist in infectious diseases; clinical aspects, diagnosis, and treatment] Karmannyi spravochnik infektsionista; klinika, diagnostika, lechenie. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1961. 233 p. (MIRA 14:7)
(COMMUNICABLE DISEASES) (MEDICINE--HANDBOOKS, MANUALS, ETC.)

BULKINA, I.G.; BUNIN, K.V., prof.; KUZNETSOV, V.S.; MIKHAYLOVA, Yu.M.; NOVAKOVSKAYA, A.A.; POKROVSKIY, V.I.; POLUMORDVINOVA, Ye.D.; SEDLOVETS, M.P.; STARSHINOVA, V.S.; TSEYDLER, S.A.; SHKHVATSABAYA, T.V.; YAKHONTOVA, N.K.; KARON, I.I., red.

[Concise manual for infectious disease specialists; clinical aspects, diagnosis, treatment] Kratkii spravochnik vracha-infektsionista; klinika, diagnostika, lechenie. Izd.2., dop. i ispr. Leningrad, Meditsina, 1965. 287 p. (MIRA 18:3)

1. Kafedra infektsionnykh bolezney 1-go Moskovskogo meditsinskogo instituta im. I.M.Sechenova (for all except Karon).

L 24870-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)
ACC NR: AP6006373 SOURCE CODE: UR/0413/66/000/002/0107/0107

AUTHORS: Kuznetsov, V. S.; Vikhman, V. S.; Leont'yev, K. L.; Zharov, N. A.; Rez, I. S.

46
B

ORG: none

TITLE: An automatic pyrometer of the spectral ratio. Class 42, No. 178146

10

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 107

TOPIC TAGS: automatic control technology, pyrometer, spectrum analyzer, precision instrument machinery

ABSTRACT: This Author Certificate presents an automatic spectral ratio pyrometer. The pyrometer contains a radiation receiver, an amplifier, an output signal commutator, and an indicator or a slave mechanism. The design shortens the pyrometer response time, increases the instrumental precision, and simplifies the scaling circuit of the pyrometer. The unit has an electro-optical system in the form of a rapid response dispersion light filter with an electro-optical crystal (see Fig. 1). This crystal is switched by an electronic commutator. The output of the circuit controlling the sensitivity of the radiation receiver (to normalize the

14

2

Card 1/2 UDC: 536.521:621.383

L 24870-66

ACC NR: AP6006373

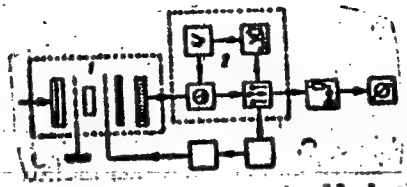


Fig. 1. 1 - rapid response controlled electro-optical light filter; 2 - circuit for controlling the sensitivity of the radiation receiver.

output signal) is connected to one of the outputs of the electronic commutator. The output of the sensitivity control circuit is connected to the outputs of the radiation receiver. Orig. art. has: 1 figure.

SUB CODE: 20,09,14/SUBM DATE: 06Jun64

Card 2/2 dda

L 10665-66 EWT(m)/EWA(m)-2 IJP(c)

ACC NR: AP5028314 SOURCE CODE: UR/0057/65/035/011/2004/2011

AUTHOR: Kuznetsov, V.S.; Fidel'skaya, R.P.

ORG: none

TITLE: Design of accelerator tubes with inclined electrodes

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35 no. 11, 1965, 2004-2011

TOPIC TAGS: particle accelerator, electrostatic accelerator, Van de Graaff generator, secondary particle, electron optics

ABSTRACT: Van de Graaff et al. (Nature, 195, 1292, 1962) have shown that voltage breakdown in Van de Graaff-type particle accelerators due to regenerative multipaction of secondary particles can be overcome by constructing the accelerator tube in sections in each of which the plane accelerating electrodes are inclined to the plane normal to the axis, the inclinations being opposite in successive sections. In the present paper advantages are pointed out of so constructing inclined electrode accelerator tubes that the accelerated ion spends the same time in each section. In such an inclined electrode accelerator tube with equal flight-time sections, the effects on the ion motion of the opposite transverse fields in successive sections exactly compensate each other, and less compensating inclination is required of the injected beam than in the case of an accelerator tube with sections of equal length. Moreover, the presence of a long section with uniform transverse field at the output

UDC: 537.533.3

Card 1/2

end of the tube minimizes contamination of the beam with low energy particles. The necessary equations are derived for the design of inclined electrode accelerator tubes with equal flight-time sections. In the derivation of the design equations the effects of the prismatic fields in the coupling regions between sections are at first neglected; the effects of the prismatic fields are subsequently calculated and the requisite corrections to the design equations are given. These corrections are found to be negligible in the first approximation. Orig. art. has: 40 formulas and 4 figures.

SUB CODE: 20 SUBM DATE: 18Jan65/ ORIG. REF: 000 OTH REF: 002

KUZNETSOV, V.S.; EFROS, L.S.

Heterocyclic derivatives of substituted 1,4-naphthoquinones. Part 1: Naphth(2,3-d)imidazole-4,9-diones. Zhur. org. khim. 1 no.8:1458-1465 Ag '65. (MIRA 18:11)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

KUZNETSOV, V.S., inzhener.

Experience in developing and applying systems of universal assembly arrangements at a machine-building plant. [Izd] LONITOMASH 24:326-354 '51. (MLRA 8:2)
(Machine tools--Accessories and attachments)

Universal-assembly parts in machine-building; album of blue prints. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1952. 211 p. (53-36765)

TJ1185.K85

KUZNETSOV, V.S., laureat Stalinskoy premii.

For further development of efficiency promotion and inventiveness.
TSvet.met.26 no.4:1-4 Jl-Ag '53. (MIRA 10:10)

1. Moskovskiy kombinat tverdykh splavov.
(Suggestion systems) (Nonferrous metal industries)

KUZNETSOV, V. S. and LYSENKO, B. M.

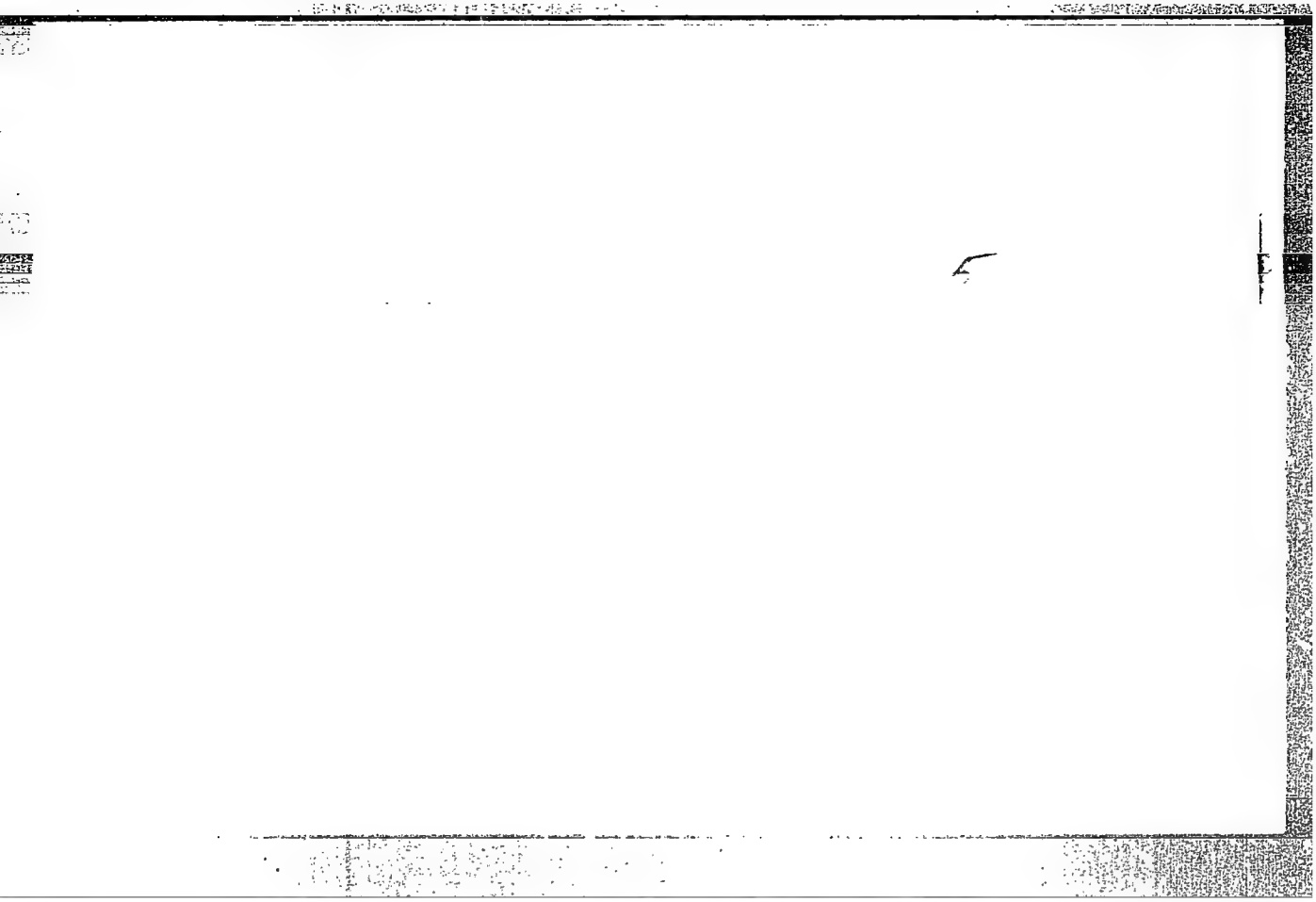
"Effect of the Elasticity of the Fixing of Turbine Blades at Their Roots on the Natural Frequency of Blade Vibration" Akademiya Nauk URSR, Kiev. Laboratoriya problem bystrokhodnykh mashin i mekhanizmov. Sbornik trudov, 1955, no. 5, p. 179-186, diagrs. 4 Russian refs.

Summary - 519851

KUSHUL',M.Ya., kandidat tekhnicheskikh nauk; KUZNETSOV,V.S., inzhener

Problems on the dynamics high speed spindles. Tekst.prom.15 no.10: 30-33 O'55. (MLRA 8:12)

(Spinning machinery)



PHASE I BOOK EXPLOITATION SOV/3805

Kuznetsov, Vladimir Sergeyevich

Freza vysokoy proizvoditel'nosti (High-Productivity Milling Cutter) [Leningrad] Lenizdat, 1959. 62 p. (Series: Novatory leningradskoy promyshlennosti) 3,000 copies printed.

Ed.: Yu. V. Pchelkin; Tech. Ed.: I.M. Tikhonova.

PURPOSE: This brochure is intended for production workers, particularly for young milling machine operators.

COVERAGE: The author, who is a milling machine operator and inventor associated with the Leningradskiy stankostroitel'nyy zavod imeni Ya. M. Sverdlova (Leningrad Machine-Tool Construction Plant imeni Ya.M. Sverdlov), tells about his occupational background and about his suggestions as to how to improve the technique of mechanical metalworking and how to increase work efficiency. The main emphasis is placed on the description of a newly designed highly productive roughing end mill cutter. No personalities are mentioned. There are no references.

Card 1/2

High-Productivity Milling Cutter SOV/3805

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AVAILABLE: Library of Congress (TJ1186.K83)

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VK/wbc/mh
7-28-60

KORITYSSKIY, Ya.I.; KUZNETSOV, V.S.; KORNEV, I.V.; LEBEDEVA, N.N.

High-lifting spindles for large packages. Biul.tekh.-ekon.inform. no.11:55-57 '59. (MIRA 13:4)
(Spinning machinery)

KORITYSSKIY, Ya.I.; KUZNETSOV, V.S.; KORNEV, I.V.; LEBEDEVA, N.N.

New high-lifting spindle for large packages. Tekst. prom. 19 no.9:32-35 S '59. (MIRA 12:12)
(Spinning machinery)

KUZNETSOV, V.S.; PONOMAREV, V.A.; MOISEYEV, M.P., inzh., retsenzent; KASPEROVICH, N.S., inzh., red.; UVAROVA, A.F., tekhn. red.

[Multipurpose attachments with interchangeable parts and in the machinery industry; album of drawings]Universal'no-sbornye prisposobleniia v mashinostroenii; al'bom chertezhei. 2. izd., ispr. i perer. Moskva, Mashgiz, 1962. 228 p. (MIRA 15:9)
(Machine tools--Attachments)

KUZNETSOV, V.S.; PONOMAREV, V.A.; KUZ'MIN, V.V., inzh., retsenzent; BERKOVICH, D.M., kand. tekhn. nauk, red.

[System of multipurpose attachments with interchangeable parts used in the machinery industry] Sistema universal'no-sbornykh prisposoblenii v mashinostroenii. Moskva, Mashinostroenie, 1964. 269 p. (MIRA 17:12)

MISHCHEVICH, V.I.; KUZNETSOV, V.S.; ASTAF'YEV, P.I.

Use of axial pumps in oil well drilling. Neft. khoz. 43 no.6: 56-60 Je '65. (MIRA 18:7)

ACC NR: AT7007344 SOURCE CODE: UR/3092/66/000/005/0110/0126

AUTHOR: Kuznetsov, V. S.

ORG: none

TITLE: High-intensity beams with ribbon geometry and with arbitrary distributions of current densities and transverse velocities

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura. Sbornik statey, no. 5, 1966, 110-126

TOPIC TAGS: particle beam, electron optics, high intensity beam, Gaussian distribution, particle trajectory, particle symmetry

ABSTRACT: The usual simplifying assumptions of uniform current density and homocentric (proportional to y) distribution of the transverse velocity component Vy are not made in this generalized theory. Here, it is assumed only that the beam parameters are independant of x (ribbon geometry), and that particle trajectories make small angles with some plane of symmetry xoz of the beam (paraxial case). The field is then zero in xoz and it is Gaussian at other points. The transverse component of the velocity can be obtained independently of the longitudinal component (beam velocity), in the same way as in the case of a layer

Card 1/2 UDC: none

distribution of electric charges, i.e., the electric density depends only on y. The problem is solved for any initial distribution of density and velocity with respect to y, and for any time interval in which trajectories do not intersect. The theory is applied to the case of an initially Gaussian density distribution with zero transverse velocity. It is shown that with increasing time, the density approaches uniform distribution, and the velocity, homocentric distribution. The use of a perfect lens in the focusing of a beam with the preceding initial parameters is also investigated in detail. The solution for a beam of initially uniform current density and homocentric distribution of the transverse velocity component is derived as a special case of the general theory. Orig. art. has: 3 figures and 77 equations.

[WA-71]
[JM]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002

L 08831-67 EWT(1) SCTB DD/GD

ACC NR: AT6036691 SOURCE CODE: UR/0000/66/000/000/0396/0397

AUTHOR: Yuganov, Ye. M.; Mirzoyev, B. M.; Krylov, Yu. V.; Kuznetsov, V. S. 31

ORG: none

TITLE: Material for the physiological and hygienic establishment of permissible levels of noise pulses (acoustic shock waves) [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 396-397

TOPIC TAGS: acoustic biologic effect, sonic boom, electroencephalography, psychophysiology, blood chemistry, endocrinology

ABSTRACT:

Supersonic aviation has added acoustic shock (the impact of pulsed noise, commonly called a sonic boom) to the range of noise effects. Physiological and hygienic norms for the intensity of acoustic shock must be established for future use in civil aviation. Foreign literature devoted to the effect of acoustic shock on man emphasizes its psychoacoustic effect. In these studies the effect of acoustic shock on human physiological functions was also studied. The function of auditory, vestibular, and motor analyzers

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0

was investigated, together with cardiovascular activity, mental working capacity, electrocutaneous resistance, and hormone and carbohydrate metabolism. EEG's and EKG's were also recorded.

Two series of experiments were conducted with human subjects: in the first the effect of a single acoustic shock with an intensity of 2.5, 5.0, or 7.5 kg/m^2 was studied, and in the second the cumulative effect of acoustic shock was investigated for 5 days.

Experimental results showed no reliable physiological changes under the influence of a single acoustic shock with an intensity of 2--2.5 kg/m^2. However, an acoustic shock of 5--5.5 kg/m^2 causes shortening of the R--R_1 interval of an EKG and decrease in the speed of arithmetical calculation. After single acoustic shocks of 7--7.5 kg/m^2, a moderate and brief disruption of the quality and speed of arithmetical calculation was noted. In addition, desynchronization of the alpha-rhythm and decrease in its amplitude were observed, as well as quickening of the pulse. Repeated and cumulative effects of acoustic shocks in the 7--7.5 kg/m^2 intensity range pro-

L 08831-67

ACC NR: AT6036691

O

duced changes [not described] in mental working capacity, EEG, EKG, and in the function of the auditory, vestibular and motor analyzers. However, there were no major discrepancies in humoral and endocrine function. Repeated acoustic shocks with an intensity of 9--9.5 kg/m^2 caused unfavorable psychoacoustic reactions, accompanied by shuddering and fright. Subjects complained of headaches, noise, and a full and stuffy feeling in the ears. Otoscopic examination showed small hemorrhages in tympanal epithelium. At the same time, the corticosteroid level in the blood increased reliably, indicating activitation of the pituitary-adrenal system. Changes in other physiological functions conformed to the pattern described above. The cumulative effect of acoustic shocks of 9.5 kg/m^2 is demonstrated by the relative degree of physiological change produced under these conditions and by the unfavorable psychoacoustic reactions. [N.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

L 07334-67 EWT(d)/EWT(m)/EWP(v)/EWP(k)/EWP(h)/EWP(l) DJ
ACC NR: AP6012162 (A,N) SOURCE CODE: UR/0413/66/000/007/0086/0087

AUTHORS: Shchemelinin, A. A.; Umarov, A. S.; Topolov, A. A.; Kuznetsov, V. S.

ORG: none

TITLE: Pendulum vibration preventer. Class 46, No. 180430 [announced by Kolomna Diesel Construction Plant im. V. V. Kuybyshev (Kolomenskiy teplovozostroitel'nyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 86-87

TOPIC TAGS: vibration, vibration damping, pendulum

ABSTRACT: This Author Certificate presents a pendulum vibration preventer, for instance, for a diesel engine. The preventer contains a hub on a knuckle roller. The hub carries a set of pendula suspended through fingers. These pendula are made in the form of weights rocking in the plane perpendicular to the axis of the roller and diminishing its rotational vibrations. To eliminate the longitudinal and the transverse vibrations, a second set of pendula is so placed that the plane of its movement lies on the rotation axis of the roller (see Fig. 1). This second set of pendula may be made in the form of weights held by the fingers on bearings fixed to

Card 1/2 UDC: 621.43-752.35

L 07334-67

ACC NR: AP6012162

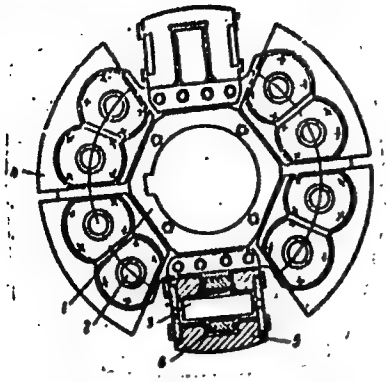

Fig. 1. 1 - hub; 2 and 3 - fingers; 4 and 5 - pendula; 6 - bearings

the hub. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 20Apr64

Card 2/2 vmb

L 34864-66 EWT(1) LJP(c)

ACC NR: AP6009178 SOURCE CODE: UR/0146/65/008/005/0080/0085

AUTHOR: Kuznetsov, V. S. 39 B

ORG: Moscow Aviation Institute (Moskovskiy aviatsionnyy institut)

TITLE: Determining ambient-temperature and supply-voltage variations tolerable for stable operation of ferrite-transistor elements 25

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 5, 1965, 80-85

TOPIC TAGS: ferrite switch, computer design, computer reliability, TRANSISTOR

ABSTRACT: Conditions of stable operation of a ferrite-transistor element are theoretically considered. Assumptions: 1-f operation, no core heating, non-saturation of transistor. The element operation is considered stable if the noise is suppressed or at least is not amplified and if the desirable signal is amplified or at least is not weakened. The read field in the element and in the load

Card 1/2 UDC: 681.142.61

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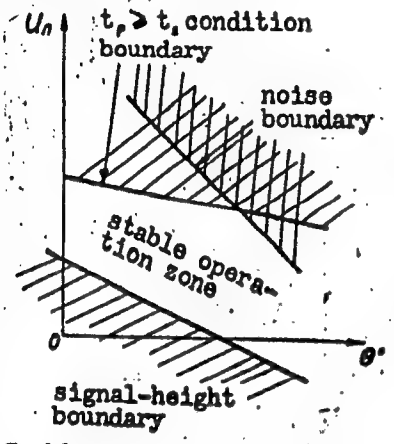
ACC NR: AP6009178



Stable-operation zone of a ferrite-transistor element

dependence on the ambient temperature is analyzed. The formulas describing this dependence permit constructing a plot of the stable-operation zone in U_p / θ° coordinates (see figure), where U_p is the pulse voltage and θ° is the ambient temperature; t_p is the pulse duration; t_s is the core-switching time. The method can be extended over all elements and subassemblies of the electronic equipment in question. Orig. art. has: 4 figures and 14 formulas.

SUB CODE: 09 / SUBM DATE: 28Dec64 / ORIG REF: 002

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L 21828-66 EWP(m)/EEC(k)-2/EWA(h)/EWP(k)/EWT(d)/EWT(1)/EWT(m)/ETC(m)-6/T-2
ACC NR: AP6003451 SOURCE CODE: UR/0216/66/000/001/0014/0020
EWA(d)/FSS-2/EWP(w)/EWP(v) TT/EM/GW

AUTHOR: Yuganov, Ye. M., Krylov, Yu. V., Kuznetsov, V. S.

62
B

ORG: none

TITLE: Some problems of development of an optimal acoustic environment in spaceship cabins

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 1, 1966, 14-20

TOPIC TAGS: noise tolerance, manned spaceflight, life support system, auditory analyzer

ABSTRACT: The effect of high-frequency (up to 3000 cps) noise (60-76 db) on the human auditory analyzer was studied for periods of up to 60 days in order to determine the acceptable threshold value of life-support system noise in manned spacecraft. Factors such as hypokinesia, restrictive clothing, capsule living conditions, and the monotony of sound were taken into consideration. Continuous noise for 72 hours raised the auditory threshold by 15—20 db and 10-day experiments resulted in a 20—25 db increase with functional disorders of the auditory analyzer after 10 days. Intermittant noise (up to 7 hrs/day) showed a cumulative

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ACC NR: AP6003451

effect only after months or years. Acceptable lower and upper limits for background noise in spacecraft cabins were found to be 50 and 60 phons for periods up to 30 days. An excessively low noise level is harmful to the neuropsychic system. To lessen the effects of monotony, changes in amplitude and frequency are recommended, but volume should not exceed 58—60 phons. [BM]

SUB CODE: 06,22/SUBM DATE: 26Jul65/ ORIG REF: 010/ OTH REF: 010

Card 2/2 nst

YUGANOV, Ye.M.; KRYLOV, Yu.V.; KUZNETSOV, V.S.

Some problems of the development of an optimal acoustic environment for a manned space cabin. Izv. AN SSSR. Ser. biol. 31 no.1:14-20 Ja-F '66. (MIRA 19:1)

1. Submitted July 26, 1965.

KUZNETSOV, V.S., dotsent, kand. sel'skokhoz. nauk; BEBIN, S.I. assistent

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The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-[illegible], 26 Feb - 3 Apr. 1954)

Name	Title of Work	Nominated by
Sokolov, N. S. Yarkov, S. P. Chizhevskiy, M. G. Cherkasov, A. A. Shestakov, A. G. Gulyakin, I. V. Peterburgskiy, A. V. Troitskiy, A. N. Luk'yanyuk, V. I. Savzdarg, E. E. Trofimovich, A. Ya. Kuznetsov, V. S. Kudryavtsev, N. Ye. Pronin, A. F. Alekhin, N. V. Sachli, S. N.	"Elements in Farming" (textbook)	Moscow Agricultural Academy imeni K. A. Timiryazev

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KUZNETSOV, V. S., Cand Agr Sci -- (diss) "Selective strengthening of summer barley /from seed planted in the spring/ in the Krymskaya oblast." Khar'kov, 1960. 16 pp; (Ministry of Agriculture Ukrainian SSR, Khar'kov Order of Labor Red Banner Agricultural Inst im V. V. Dokuchayev); 150 copies; free; (KL, 26-60, 141)

MAYSURYAN, N.A., akademik; STEPANOV, V.N., prof.; KUZNETSOV, V.S., dots.; LUK'YANYUK, V.I., dots.; CHERNOMAZ, P.A., dots.; OZEROV, V.N., red.

[Plant growing] Rastenievodstvo. Izd.2., perer. [By] N.A. Maisurian i dr. Moskva, Kolos, 1965. 471 p.
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ACC NR: AT6036602 SOURCE CODE: UR/0000/66/000/000/0239/0240

AUTHOR: Kuznetsov, V. S.

ORG: none

TITLE: Some features of the organism's reaction to acoustic pressure pulses [Paper presented at the Conference on Problems of Space Medicine held in Moscow -24-27May]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 239-240

TOPIC TAGS: acoustic biologic effect, sonic boom, human physiology, electroencephalography

ABSTRACT:
Experiments were conducted to study some indices of the human reaction to acoustic shock, imitating the sonic boom of supersonic aircraft. Changes in electrical activity of the cerebral cortex were studied according to EEG's and autonomic reactions. In addition, pulse rate, respiration and the cutaneous-galvanic reaction were investigated. Acoustic shocks with intensities of 2.5, 5, 7.5, and 9.5 kg/m^2 and duration of 150 msec were used as stimuli. These shock levels correspond to 121 db, 128 db, 131 db, and 133 db, respectively, above an audibility threshold of 2.10^{-4} bar. EEG's

Card 1/2